

पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्ट की पूर्ण व्यापकित प्राप्त सहायक कंपनी)



उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GO1188682

Power Supply Position in Northern Region for 29.10.2015

Date of Reporting : 30.10.2015

I. Regional Availability/Demand:

Demand Met	Evening Peak (19:00 Hrs) MW			Demand Met	Off Peak (03:00 Hrs) MW			Day Energy (Net MU)	
	Shortage	Requirement	Freq* (Hz)		Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage
37461	618	38079	50.12	25384	184	25568	50.11	741.2	27.38

* Half hourly (two 15 minutes block—one block each before and after the designated time) average frequency

II. A. State's Load Details (At States periphery) in MUs:

State	State's Control Area Generation (Net MU)				Drawal Schedule (Net MU)	Actual Drawal (Net MU)	UI (Net MU)	Consumption (Net MU)	Shortages* (MU)
	Thermal	Hydro	Renewable/others \$	Total					
Punjab	38.64	10.85		49.48	48.74	48.95	0.21	98.43	0.00
Haryana	52.75	0.42		53.16	55.05	55.19	0.15	108.36	0.00
Rajasthan	107.74	3.92	9.65	121.32	59.84	60.82	0.98	182.14	0.00
Delhi	4.72			4.72	54.12	53.82	-0.29	58.55	0.01
UP	94.27	7.70		101.97	95.68	93.97	-1.72	195.94	20.36
Uttarakhand		9.57		9.57	21.58	22.67	1.09	32.24	0.00
HP		6.99		6.99	15.85	17.26	1.42	24.26	0.00
J & K		10.80	0.00	10.80	28.38	27.00	-1.37	37.81	7.01
Chandigarh				0.00	3.58	3.48	0.27	3.48	0.00
Total	298.12	50.25	9.65	358.02	382.81	383.18	0.73	741.20	27.38

* Shortage furnished by the respective constituent. \$ Others include UP Co-generation and JK Diesel

II. B. State's Demand Met in MWs:

State	Evening Peak (19:00 Hrs) MW				Off Peak (03:00 Hrs) MW				# Max(hourly) Demand Met of Day (MW)
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	
Punjab	4411	0	-241	-455	3323	0	52	-446	4549
Haryana	6438	0	38	-285	3413	0	-142	-264	6438
Rajasthan	8550	0	-10	148	6951	0	-4	632	8550
Delhi	3331	0	-39	-38	1784	0	-63	-408	3331
UP	10169	230	297	50	6848	0	-472	130	10169
Uttarakhand	1639	0	44	304	1142	0	49	279	1639
HP	1185	0	-44	-453	783	0	1	150	1338
J&K	1553	388	17	203	1044	184	-131	203	1609
Chandigarh	184	0	-20	-80	96	0	-8	0	184
Total	37461	618	41	-605	25384	184	-719	276	37461

* STOA figures are at sellers boundary & PX figures are at regional boundary.

figures may not be at simultaneous hour.

Diversity is 1.01

III. Regional Entities :

Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW (Gross)	Off Peak MW (Gross)	Energy (Net MU)	Average Sentout(MW)	Schedule Net MU	UI (OG:(+ve), UG: (-ve))	
								UI	Net MU
A. NTPC									
Singrauli STPS (5*200+2*500)	2000	1900	1883	1432	40.31	1679	39.37	0.94	
Rihand I STPS (2*500)	1000	900	900	636	15.39	641	14.91	0.48	
Rihand II STPS (2*500)	1000	963	628	657	15.50	646	14.73	0.76	
Rihand III STPS (2*500)	1000	480	314	328	8.17	340	7.68	0.49	
Dadri I STPS (4*210)	840	810	135	146	3.39	141	3.36	0.03	
Dadri II STPS (2*490)	980	980	650	630	15.63	651	16.46	-0.83	
Uncharhar I TPS (2*210)	420	319	299	136	4.94	206	5.12	-0.18	
Uncharhar II TPS (2*210)	420	400	271	263	5.93	247	5.81	0.13	
Uncharhar III TPS (1*220)	210	200	134	128	2.94	122	2.91	0.03	
ISTPP (Jhajjar) (3*500)	1500	1436	703	614	14.98	624	13.92	1.06	
Dadri GPS (4*130.19+2*154.51)	830	688	297	296	6.97	291	7.07	-0.09	
Anta GPS (3*88.71+1*153.2)	419	409	0	0	0.00	0	0.00	0.00	
Auraiya GPS (4*111.19+2*109.30)	663	650	197	206	4.69	196	4.67	0.02	
Dadri Solar	5	1	0	0	0.00	0	0.02	-0.02	
Uncharhar Solar	10	3	0	0	0.00	0	0.06	-0.06	
Singrauli Solar	15	1	0	0	0.00	0	0.03	-0.03	
KHEP	800	650	556	0	3.76	157	3.53	0.23	
Sub Total (A)	12112	10789	6779	5471	143	5942	140	3	
B. NPC									
NAPS (2*220)	440	399	445	445	9.84	410	9.58	0.26	
RAPS- B (2*220)	440	397	446	451	9.71	405	9.53	0.18	
RAPS- C (2*220)	440	410	454	454	9.80	408	9.84	-0.04	
Sub Total (B)	1320	1206	1345	1350	29.35	1223	28.94	0.40	
C. NHPC									
Chamera I HPS (3*180)	540	540	204	0	1.70	71	1.62	0.08	
Chamera II HPS (3*100)	300	300	269	0	0.00	0	1.90	-1.90	
Chamera III HPS (3*77)	231	229	228	0	1.33	55	1.23	0.10	
Bairasuli HPS(3*60)	180	179	173	0	0.86	36	0.82	0.04	
Saikal-HPS (6*115)	690	290	448	330	7.69	321	6.95	0.75	
Tanakpur-HPS (3*40)	94	37	60	35	0.97	40	0.88	0.09	
Uri-I HPS (4*120)	480	448	367	470	11.05	460	10.69	0.36	
Uri-II HPS (4*60)	240	238	243	243	5.75	240	5.72	0.03	
Dhauliganga-HPS (4*70)	280	280	278	0	1.60	66	1.40	0.19	
Dulhasti-HPS (3*130)	390	387	399	0	5.11	213	4.78	0.33	
Sewa-II HPS (3*40)	120	119	119	0	0.71	29	0.65	0.05	
Parbati 3 (4*130)	520	260	0	0	0.81	34	0.59	0.22	
Sub Total (C)	4065	3307	2787	1078	38	1566	37	0	
D.SJVNL									
NJPC (6*250)	1500	1605	1542	0	11.19	466	11.26	-0.08	
Rampur HEP (6*68.67)	412	432	430	0	3.18	133	3.10	0.08	
Sub Total (D)	1912	2037	1972	0	14.37	599	14.36	0.00	
E. THDC									
Tehri HPS (4*250)	1000	1080	1003	0	6.82	284	6.66	0.17	
Koteshwar HPS (4*100)	400	92	98	90	2.30	96	2.20	0.10	
Sub Total (E)	1400	1172	1101	90	9.12	380	8.86	0.27	
F. BBMB									
Bhakra HPS (2*108+3*126+5*157)	1379	527	1023	386	12.89	537	12.65	0.23	
Dehar HPS (6*165)	990	213	660	145	5.27	220	5.10	0.17	
Pong HPS (6*66)	396	212	324	132	5.10	213	5.08	0.02	
Sub Total (F)	2765	951	2007	663	23.26	969	22.83	0.43	
G. IPP(s)/JV(s)									
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	88	0	0.80	33	0.77	0.03	
KARCHAM W ANGT00 HPS(IPP) (4*250)	1000	0	760	0	6.49	271	6.72	-0.23	
Malana Stg-II HPS (2*50)	100	0	0	0	0.32	13	0.30	0.02	
Shree Cement TPS (2*150)	300	0	259	260	6.13	255	6.18	-0.06	
Budhil HPS(IPP) (2*35)	70	0	0	0	0.00	0	0.34	-0.34	
Sub Total (G)	1662	0	1107	260	13.73	572	14.31	-0.57	
H. Total Regional Entities (A-G)	25237	19462	17098	8912	270.00	11250	266.18	3.82	

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent out MW)
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	160	160	3.49	145
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	195	130	3.76	157
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	203	204	4.31	180
	Goindwal(GVK)		0	0	0.00	0
	Rajpura (2*700)	1400	345	350	11.27	470
	Talwandi Saboo (2*660)	1320	690	676	15.81	659
	Thermal (Total)	5360	1593	1520	38.64	1610
	Total Hydro	1000	446	418	10.85	452
Total Punjab	6360	2039	1938	49.48	2062	
Haryana	Panipat TPS (4*110+2*210+2*250)	1367	225	222	5.20	217
	DCRTPP (Yamuna nagar) (2*300)	600	479	454	10.91	455
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTTP (khedar) (IPP) (2*600)	1200	896	764	18.53	772
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP) (2*660)	1320	763	741	18.11	755
	Thermal (Total)	4944	2363	2181	52.75	2198
	Total Hydro	62	16	16	0.42	17
	Total Haryana	5006	2379	2197	53.16	2215
	Rajasthan	kota TPS (2*110+2*195+3*210)	1240	901	828	20.92
suratgarh TPS (6*250)		1500	221	608	9.11	380
Chabra TPS (4*250)		1000	390	376	9.11	380
Dholpur GPS (3*110)		330	0	0	0.00	0
Ramgarh GPS (1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)		271	240	205	5.28	220
RAPS A (NPC) (1*100+1*200)		300	162	160	3.94	164
Barsingar (NLC) (2*125)		250	187	167	4.22	176
Giral LTPS (2*125)		250	76	82	1.54	64
Rajwest LTPS (IPP) (8*135)		1080	723	443	14.48	603
VS LIGNITE LTPS (IPP) (1*135)		135	0	0	0.00	0
Kalisindh Thermal(2*600)		1200	970	940	23.55	981
Kawati(Adani) (2*660)		1320	1115	435	15.59	650
Thermal (Total)		8876	4985	4244	108	4489
Total Hydro		550	175	188	3.92	163
Wind power		3214	420	79	8.82	367
Biomass		99	27	27	0.66	27
Solar		730	1	0	0.18	7
Renewable/Others (Total)		4043	448	106	9.65	402
Total Rajasthan		13469	5608	4538	121.32	5055
UP		Anpara TPS (3*210+2*500)	1630	1288	1092	30.00
	Obra TPS (2*50+2*94+5*200)	1194	464	402	10.80	450
	Paricha TPS (2*110+2*220+2*250)	1140	621	522	12.80	533
	Panki TPS (2*105)	210	63	54	1.30	54
	Haridwar TPS (1*60+1*105+2*250)	665	513	394	10.30	429
	Tanda TPS (NTPC) (4*110)	440	144	190	3.87	161
	Roza TPS (IPP) (4*300)	1200	194	387	7.90	329
	Anpara-C (IPP) (2*600)	1200	639	645	15.40	642
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	57	57	1.30	54
	Anpara-D(1*500)	500	0	0	0.00	0
	Lalitpur TPS(1*660)	660	0	0	0.00	0
	Thermal (Total)	9289	3983	3743	94	3903
	Vishnuparyag HPS (IPP)(4*110)	440	137	137	3.30	138
	Alakanada(4*82.5)	330	83	84	2.20	92
	Other Hydro	527	182	23	2.20	92
	Cogeneration	981	25	25	0.60	25
	Total UP	11567	4410	4012	102	4249
Uttarakhand	Total Hydro	1398	477	364	9.57	399
	Total Uttarakhand	1398	477	364	9.57	399
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.02	-1
	Delhi Gas Turbine (6x30 + 3x34)	282	35	35	0.92	38
	Pragati Gas Turbine (2x104+ 1x122)	330	149	159	3.75	156
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (4*216+2*253)	1370	-6	-8	0.07	3
	Badarpur TPS (NTPC) (3*95+2*210)	705	162	164	0.00	0
	Thermal (Total)	2917	340	350	4.72	197
	Total Delhi	2917	340	350	4.72	197
HP	Baspa HPS (IPP) (3*100)	300	144	72	1.89	79
	Malana HPS (IPP) (2*43)	86	0	0	0.41	17
	Other Hydro	878	214	191	4.70	196
	Total HP	1264	358	263	6.99	291
J & K	Baglihar HPS (IPP) (3*150)	450	289	289	8.46	352
	Other Hydro/IPP	560	110	91	2.35	98
	Gas/Diesel/Others	190	0	0	0.00	0
	Total J & K	1200	399	380	10.80	450
Total State Control Area Generation		43181	16010	14042	358.02	14917
J. Net Inter Regional Exchange (Import (+ve)/Export (-ve))			4812	5186	106.62	4442
Total Regional Availability(Gross)		68418	37920	28140	734.64	30610

IV. Total Hydro Generation:

Regional Entities Hydro	12234	9271	1831	95.69	3987
State Control Area Hydro	6581	2273	1873	50	2094
Total Regional Hydro	18815	11544	3704	145.94	6081

V(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(19:00 Hrs)		Off Peak(03:00 Hrs)		Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW		MW		Import	Export	Import	Export	
Vindhychal(HVDC B/B)	250		250		0	250	0.00	6.09	-6.09
765 KV Gwalior-Agra (D/C)	2264		1248		2766	0	46.46	0.00	46.46
400 KV Zerda-Kankrol	-101		-77		0	183	0.00	2.15	-2.15
400 KV Zerda-Bhinmal	-156		13		105	204	0.00	0.76	-0.76
220 KV Auraiya-Malanpur	-44		-57		0	66	0.00	1.11	-1.11
220 KV Badoh-Kota/Morak	-99		-119		0	154	0.00	2.56	-2.56
Mundra-Mohindergarh(HVDC Bipole)	2000		1500		2004	0	39.72	0.00	39.72
400 KV Vindhychal - Rihand	0		0		0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	575		548		1094	0	20.17	0.00	20.17
Sub Total WR	4689		3306				106.34	12.67	93.67
Pusauli Bypass/HVDC	400		400		0	400	0.00	8.99	-8.99
400 KV MZP- GKP (D/C)	-254		130		332	304	2.16	0.00	2.16
400 KV Patna-Balia(D/C) X 2	228		338		457	0	8.76	0.00	8.76
400 KV B'Shanif-Balia (D/C)	-191		-72		65	205	0.00	0.77	-0.77
765 KV Gaya-Balia	57		24		222	0	1.23	0.00	1.23
765 KV Gaya-Fatehpur	-62		33		187	117	0.80	0.00	0.80
220 KV Pusauli-Sahupuri	-111		-71		0	112	0.00	2.05	-2.05
132 KV K'nasa-Sahupuri	0		0		0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-10		-10		0	28	0.00	0.36	-0.36
132 KV Garhwa-Rihand	0		0		0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-246		-94		137	322	0.00	1.66	-1.66
400 KV Barh -GKP (D/C)	312		302		400	0	7.86	0.00	7.86
Sub Total ER	123		980				20.80	13.82	6.98
+/- 800 KV BiswanathChariali-Agra	0		900		1100	0	5.96	0.00	5.96
Sub Total NER	0		900				5.96	0.00	5.96
Total IR Exch	4812		5186				133.11	26.49	106.62

V(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)			Power Exchange Shdi (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Total	Through ER	Through WR	Through ER	Through WR
26.07	1.38	27.45	3.49	-20.67	12.74	7.82	1.35	-1.35	
Total IR Schedule (MU)									
Through ER	Through WR Incids Mndra	Total	Through ER	Through WR	Total	Through ER	Through WR	Total	
45.03	85.57	130.60	6.98	93.67	100.65	-38.05	8.11	-29.94	

V(C). Inter National Exchange with Nepal [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(19:00 Hrs)		Off Peak(03:00 Hrs)		Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW		MW		Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	0		0		0	0	0	0	0.00

VI. Frequency Profile <----- % of Time Frequency ----->

<49.2	<49.7	<49.8	<49.9	<50.0	49.9-50.05	50.05-50.10	50.10-50.20	>50.20	>50.50
0.00	0.00	0.87	10.71	48.71	64.12	20.66	4.33	0.24	0.00

<----- Frequency (Hz) ----->

Maximum				Minimum				Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Freq	Time	Freq	Time	Hz	(Hz)	MAX (Hz)	MIN (Hz)					
50.22	21.56	49.71	6.44	50.00	0.054	0.074	50.25	49.91				

VII. Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)			
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV
Rihand	400	412	03:28	401	17:23	0.0	0.0	0.0	0.0
Gorakhpur	400	428	03:26	404	17:54	0.0	0.0	22.4	0.0
Bareilly	400	421	03:31	399	18:09	0.0	0.0	0.0	0.0
Kanpur	400	411	00:00	406	18:10	0.0	0.0	22.3	0.0
Dadri	400	426	03:27	402	18:09	0.0	0.0	23.3	0.0
Ballabgarh	400	432	00:00	407	18:09	0.0	0.0	38.7	11.9
Bawana	400	429	01:16	404	18:09	0.0	0.0	33.1	0.0
Bassi	400	428	03:27	402	18:10	0.0	0.0	30.1	0.0
Hissar	400	422	01:01	399	18:09	0.0	0.0	5.3	0.0
Moga	400	425	01:06	404	18:09	0.0	0.0	10.0	0.0
Abdullapur	400	426	01:04	403	18:08	0.0	0.0	23.1	0.0
Nalagarh	400	430	00:33	407	18:13	0.0	0.0	31.3	0.0
Kishenpur	400	428	01:06	399	18:20	0.0	0.0	17.8	0.0
Wagoora	400	407	01:06	378	18:20	0.3	21.2	0.0	0.0
Amritsar	400	429	01:00	408	18:09	0.0	0.0	33.3	0.0
Kashipur	400	419	21:51	410	18:08	0.0	0.0	0.0	0.0
Hamirpur	400	424	00:30	401	18:17	0.0	0.0	27.4	0.0
Rishikesh	400	411	21:50	386	18:08	0.0	8.1	0.0	0.0

VIII. Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)			
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV
Fatehpur	765	781	03:28	736	18:09	0.0	1.9	0.0	0.0
Balia	765	789	03:29	749	17:55	0.0	0.0	0.0	0.0
Moga	765	804	01:02	764	18:09	0.0	0.0	4.4	0.0
Agra	765	796	00:00	759	18:10	0.0	0.0	0.0	0.0
Bhiwani	765	811	01:03	769	18:08	0.0	0.0	12.4	0.0
Unnao	765	776	00:00	734	18:10	0.0	7.4	0.0	0.0
Lucknow	765	787	02:39	750	18:10	0.0	0.0	0.0	0.0
Meerut	765	813	00:00	768	18:09	0.0	0.0	20.2	0.0
Jhatikara	765	800	00:00	765	00:00	0.0	0.0	0.0	0.0
Bareilly	765	800	00:00	765	00:00	0.0	0.0	0.0	0.0
Anta	765	785	00:00	762	16:35	0.0	0.0	0.0	0.0
Phagi	765	796	00:00	760	14:21	0.0	0.0	0.0	0.0

IX. Reservoir Parameters:

Name of Reservoir	Parameters		Present Parameters		Last Year		Last day	
	FRL (m)	MDDL (m)	Level (m)	Energy (MU)	Level (m)	Energy (MU)	Inflow (m ³ /s)	Usage (m ³ /s)
Bhakra	513.59	445.62	509.49	1530.03	507.32	1411.35	250.41	344.11
Pong	426.72	384.05	418.72	834.82	413.93	633.63	68.58	303.64
Tehri	829.79	740.04	817.95	961.00	823.70	1076.00	75.69	154.00
Koteshwar	612.50	598.50	609.06	4.21	608.67	3.94	154.00	151.45
Chamera-I	760.00	748.75	756.40	0.00	0.00	0.00	76.18	46.27
Rihand	268.22	252.98	850.80	268.30	853.90	319.80	0.00	0.00
RPS	352.80	343.81	1145.00	0.00	0.00	0.00	0.00	0.00
Jawahar Sagar	298.70	295.78	0.00	0.00	0.00	0.00	0.00	0.00
RSD	527.91	487.91	511.64	4.20	510.11	1.41	143.94	154.86

* NA: Not Available

X(A). Short-Term Open Access Details:

State	Off- Peak Hours (03:00 Hrs)			Peak Hours (19:00 Hrs)			Day Energy (MU)		
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MU)	IEX / PXIL (MU)	Total (MU)
Punjab	-695	249	0	-700	245	0	-13.46	5.57	-7.89
Delhi	-186	-222	0	-87	49	0	-3.03	1.00	-2.02
Haryana	-544	280	0	-544	259	0	-13.05	4.38	-8.68
HP	-50	200	0	127	-579	0	1.33	-0.94	0.38
J&K	203	0	0	203	0	0	4.88	-0.12	4.77
CHD	0	0	0	0	-80	0	0.00	-0.29	-0.29
Rajasthan	-5	637	0	-5	153	0	1.62	13.54	15.16
UP	130	0	0	50	0	0	1.90	0.00	1.90
Uttarakhand	196	83	0	196	108	0	4.71	4.28	8.99
Total	-950	1226	0	-760	155	0	-15.10	27.42	12.32

X(B). Short-Term Open Access Details:

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	-295	-700	265	171	0	0
Delhi	-13	-186	366	-283	0	0
Haryana	-544	-544	290	-211	0	0
HP	127	-50	200	-627	0	0
J&K	203	203	0	-15	0	0
CHD	0	0	20	-80	0	0
Rajasthan	189	-5	802	122	0	0
UP	187	-7	0	0	0	0
Uttarakhand	196	196	413	8	0	0

XI. System Constraints:

XII. Grid Disturbance / Any Other Significant Event:

XIII. Weather Conditions For 29.10.2015 :
Normal.

XIV. Synchronisation of new generating units :

XV. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / substation :
80MVAR B/R at 400kV Rampur first time charged at 1804 Hrs.

XVI. Tripping of lines in pooling stations :

XVII. Complete generation loss in a generating station :